History of India’s Nuclear Program

Why in news?

The nuclear ‘chain reaction’ and neighbourhood challenges led India to acquire nuclear weapons.

What is the history of India’s nuclear program?

- **Dual intent strategy -** It was followed by then Prime Minister of India Jawaharlal Nehru.
- He made it clear in 1950 that while he was against the atom bomb, the call for a nuclear-free world must come from a position of strength, not weakness.

Homi Jehangir Bhabha was called as the father of India’s nuclear program and he is the founder of Tata Institute of Fundamental Research.

- **Nuclear program-** Homi Bhabha was tasked to develop the capability to use nuclear energy for peaceful purposes, but to retain the capacity to develop a weapon if the need arose.
- **Indo-China War 1962-** India’s external environment became more challenging after the defeat to China in 1962.
- In 1960’s almost all the permanent members in United Nations Security Council had tested nuclear weapons.
- **Smiling Buddha-** India’s first nuclear test in 1974 where it demonstrated its capability to produce nuclear weapons.
- **Nuclear Suppliers Group-** It was founded in 1974 as response to India’s nuclear test.
- It aims to control the export of materials, equipment and technology that can be used to manufacture nuclear weapons.
- **Operation Shakthi-** It is India’s second nuclear test in 1998 which marked the beginning of the rise of a strong and self-confident India.

What is India’s Nuclear Doctrine?

- India’s official nuclear doctrine is codified in a 2003 document, which takes cues from the 1999 draft doctrine.
- Since 2003, India’s nuclear doctrine has had three primary components.
    - No First Use
    - Massive Retaliation
    - Credible Minimum Deterrence
- **No First Use -** India will only use nuclear weapons in response to a nuclear attack on Indian Territory or Indian forces.

- Non-use of nuclear weapons against non-nuclear weapon states.
- A warning is made about their possible use in response to a chemical or biological attack.
- **Massive Retaliation -** India's response to a first strike will be massive, to cause 'unacceptable damage'.
- While the doctrine does not explicitly espouse a counter-value strategy (civilian targets), the wording implies the same.
- **Credible Minimum Deterrence** - The number and capabilities of India's nuclear weapons and delivery systems should merely be sufficient to ensure intolerable retaliation.
- This should also keep in mind first-strike survival of its relatively meagre arsenal.
- India's strategic nuclear command was formally established in 2003.
- **Nuclear Command Authority**

Council	Head	Function
Political council	Prime Minister	It is the sole body which can authorize the use of nuclear weapons
Executive council	National Security Advisor	It provides inputs for decision making by the Nuclear Command Authority and executes the directives given to it by the Political Council

What is India's nuclear triad?

- It refers to the delivery of nuclear weapons via land, sea and air i.e.
  - Land-based intercontinental ballistic missiles (ICBMs),
  - Submarine-launched ballistic missiles (SLBMs), and
  - Strategic bombers.
- **Purpose -** To reduce the possibility that an enemy could destroy all of a nation's nuclear forces in a first-strike attack.
- It ensures a credible threat of a second strike, and thus increases a nation's nuclear deterrence.

What are the nuclear organisations present globally?

- **Comprehensive Test Ban Treaty (CTBT)** – It prohibits any nuclear weapon test explosion or any other nuclear explosion anywhere in the world.
- The treaty was opened for signature in 1996, and has been signed by 186 nations and ratified by 176.
- The treaty cannot formally enter into force until it is ratified by 44 specific nations, 8 of which have yet to do so: China, ***India,*** Pakistan, North Korea, Israel, Iran, Egypt, and the United States.
- **International Atomic Energy Agency (IAEA)** – Also known as the world's *Atoms for Peace and Development* organization within the United Nations.
- It is the international centre for cooperation in the nuclear field to promote the safe, secure and peaceful use of nuclear technologies.

India is a member of the Multilateral Export Control Regime (All 3 groupings) ***except the Nuclear Suppliers Group.***

References

1. Indian Express- Nuclear weapons and India
2. PIB- Nuclear doctrine